

Response

Application No. 10/522,236

Attorney Docket No. 052033

AMENDMENTS TO THE CLAIMS

Listing of claims:

This listing of claims replaces all prior versions and listings of claims in the application.

Claim 1 (Currently Amended): An image recognition apparatus for recognizing movements of players matched against each other between domains partitioned with such an obstacle as net in a sport match or game from contents including a television program being telecasted to show the sport match or game, an image material in an uncompleted state for broadcasting and contents recorded in such a recording medium as a VTR, the image recognition apparatus comprising: a score information obtaining section configured to obtain score information indicative of scores of the respective players which vary as the sport match or game proceeds; a play event information obtaining section configured to obtain play event information indicative of a characteristic movement of each of the players from picture information included in the contents, the picture information containing images ~~of respective~~ of the obstacle and the players, and the score information displayed on a screen, ~~and like images~~; and an image substance recognizing section configured to make a comparison between a score information item obtained immediately before a point in time of generation of the play event information and a score information item obtained immediately after the point in time and make reference to a result brought by the play event information, thereby recognizing a substance of an image provided by the play event information.

Claim 2 (Original): The image recognition apparatus according to claim 1, wherein the score information obtaining section is configured to obtain the score information from at least one of the picture information included in the contents, sound information including commentary voice of a commentator, and data information transmitted as multiplexed on radio waves during broadcasting.

Claim 3 (Previously Presented): The image recognition apparatus according to claim 1, further comprising: a domain element extracting section configured to extract from the picture information facility information including information on the obstacle, information on the domains and information on boundary lines between the domains and an area outside the domains, player's position information indicative of a player's position, and instrument information on an instrument moving between the domains to serve as an object of score count in the sport match or game; rule information storage section configured to store rule information on the sport match or game; and basic movement storage section configured to store basic movement information on players' characteristic movements generalized in a sport of concern, wherein the play event information obtaining section includes a play event information determining section configured to determine a play event information item on a play event characteristic of each of the players included in the picture information as the play event information based on domain elements extracted from the picture information, the rule information, and the basic movement information stored in the basic movement information storage section.

Claim 4 (Original): The image recognition apparatus according to claim 3, wherein the player's position information is position information indicative of a domain containing each of the players and the instrument constantly held and used by the player.

Claim 5 (Previously Presented): The image recognition apparatus according to claim 3, wherein the domain element extracting section is configured to extract the player's position information from the picture information based on the facility information extracted by the domain element extracting section.

Claim 6 (Previously Presented): The image recognition apparatus according to claim 3, wherein the domain element extracting section is configured to extract the instrument information from the picture information based on the facility information and the player's position information extracted by the domain element extracting section.

Claim 7 (Previously Presented): The image recognition apparatus according to claim 3, wherein the play event information obtaining section includes a play event index information output section configured to output plural play event information items determined by the play event information determining section as arranged in a time sequence.

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Claim 8 (Original): The image recognition apparatus according to claim 7, wherein the play event index information output section is configured to output the play event information items together with instrument information items in a time sequence.

Claim 9 (Canceled)

Claim 10 (Currently Amended): ~~An image recognition program cooperative with a computer for causing~~ A computer readable medium encoded with an image recognition program such that when executed, causes an image recognition apparatus to operate to recognize movements of players matched against each other between domains partitioned with such an obstacle as net in a sport match or game from contents including a television program being telecasted to show the sport match or game, an image material in an uncompleted state for broadcasting and contents recorded in such a recording medium as a VTR, the image recognition program being configured to cause the image recognition apparatus to function as: a score information obtaining means configured to obtain score information indicative of scores of the respective players which vary as the sport match or game proceeds; a play event information obtaining means configured to obtain play event information indicative of a characteristic movement of each of the players from picture information included in the contents, the picture information containing images ~~of respective~~ of the obstacle and the players, and the score information displayed on a screen, ~~and like images~~; and an image substance recognizing means configured to make a comparison between a score information item obtained immediately before

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a point in time of generation of the play event information and a score information item obtained immediately after the point in time and make reference to a result brought by the play event information, thereby recognizing image contents of the play event information.